

This Page Is Inserted by IFW Operations  
and is not a part of the Official Record

## **BEST AVAILABLE IMAGES**

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images may include (but are not limited to):

- BLACK BORDERS
- TEXT CUT OFF AT TOP, BOTTOM OR SIDES
- FADED TEXT
- ILLEGIBLE TEXT
- SKEWED/SLANTED IMAGES
- COLORED PHOTOS
- BLACK OR VERY BLACK AND WHITE DARK PHOTOS
- GRAY SCALE DOCUMENTS

IMAGES ARE BEST AVAILABLE COPY.

**As rescanning documents *will not* correct images,  
please do not report the images to the  
Image Problems Mailbox.**

522-1739



13

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN THE APPLICATION OF )

Jan Spooren et al. )

Group Art Unit No. 2152

SERIAL NO: 09/838,728 )

FILED: April 19, 2000 )

FOR: SYSTEM AND METHOD FOR ON-LINE )  
COPYRIGHT MANAGEMENT )

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to "Commissioner of Patents, Washington, D.C. 20231", on August 13, 2001.

Name of person signing Phyllis Mallard

Signature Phyllis Mallard

**CLAIM FOR PRIORITY**

Honorable Commissioner of  
Patents and Trademarks  
Washington, D.C. 20231

Dear Sir:

Under the International Convention, for the purposes of priority, applicant claims the benefit of GB Application No. 0009634.7, filed April 19, 2000.

A certified copy of said application is appended hereto.

DATE: August 13, 2001

Respectfully submitted,

William M. Lee, Jr.  
William M. Lee, Jr.  
Registration No. 26,935  
LEE, MANN, SMITH, MCWILLIAMS  
SWEENEY & OHLSON  
P.O. Box 2786  
Chicago, Illinois 60690-2786  
(312) 368-1300  
Fax (312) 368-0034



INVESTOR IN PEOPLE

The Patent Office  
Concept House  
Cardiff Road  
Newport  
South Wales  
NP10 8QQ

I, the undersigned, being an officer duly authorised in accordance with Section 74(1) and (4) of the Deregulation & Contracting Out Act 1994, to sign and issue certificates on behalf of the Comptroller-General, hereby certify that annexed hereto is a true copy of the documents as originally filed in connection with the patent application identified therein.

In accordance with the Patents (Companies Re-registration) Rules 1982, if a company named in this certificate and any accompanying documents has re-registered under the Companies Act 1980 with the same name as that with which it was registered immediately before re-registration save for the substitution as, or inclusion as, the last part of the name of the words "public limited company" or their equivalents in Welsh, references to the name of the company in this certificate and any accompanying documents shall be treated as references to the name with which it is so re-registered.

In accordance with the rules, the words "public limited company" may be replaced by p.l.c., plc, P.L.C. or PLC.

Re-registration under the Companies Act does not constitute a new legal entity but merely subjects the company to certain additional company law rules.

Signed

Dated

11 JUN 2001



INVESTOR IN PEOPLE

GB0009634.7

By virtue of a direction given under Section 30 of the Patents Act 1977, the application is proceeding in the name of

INFO2CLEAR NV  
Incorporated in Belgium  
Joseph Wybranlaan 40  
B-1070 Brussels  
Belgium

[ADP No. 08053118001]

19-04-2000 14:27

BIRD &amp; GOEN &amp; CO

32 16 480528 P.02/17

THE PATENT OFFICE  
A  
19 APR 2000  
RECEIVED BY FAX

Patent  
Office

Patents Act 1977  
(Rule 16)

# Request for grant of a patent

(See the notes on the back of this form. You can also get an explanatory leaflet from the Patent Office to help you fill in this form.)

19APR00 E530944-1 010017  
P01/7700 0.00-0009634.7

Cardiff Road  
Newport  
Gwent NP9 1RH

1. Your reference

11511-GB

2. Patent application number

(The Patent Office will fill in this part)

6009634.7

19 APR 2000

3. Full name, address and postcode of the or of each applicant (underline all surnames)

INFOCLEAR  
JOSEPH WYBRAN 40  
B-1070 BRUSSELS  
BELGIUM

Patents ADP number (if you know it)

If the applicant is a corporate body, give the country/state of its incorporation

BE

7881311001

APPLICATION FILED

02.01.01

4. Title of the invention

THE INFO2CLEAR SYSTEM FOR ON-LINE COPYRIGHT MANAGEMENT

5. Name of your agent (if you have one)

William E. Bird of Bird Goen & Co

"Address for service" in the United Kingdom to which all correspondence should be sent (including the postcode)

Bird & Co  
c/o Jane Bird  
9 Louise Court  
11 Devonshire Road  
Bexleyheath  
Kent DA6 8DL  
United Kingdom

Patents ADP number (if you know it)

7764665001

If you are declaring priority from one or more earlier patent applications, give the country and the date of filing of the or of each of these earlier applications and (if you know it) the or each application number

Country

Priority application number  
(if you know it)

Date of filing  
(day / month / year)

If this application is divided or otherwise derived from an earlier UK application, give the number and the filing date of the earlier application

Number of earlier application

Date of filing  
(day / month / year)

Is a statement of inventorship and of right to grant of a patent required in support of this request? (Answer Yes if:

YES

a) any applicant named in part 3 is not an inventor, or

b) there is an inventor who is not named as an applicant, or

c) any named applicant is a corporate body. See note (a))

19-04-2000 14:27

BIRD &amp; GOEN &amp; CO

32 16 480528 P.03/17

## Patent Form 1/77

9. Enter the number of sheets for any of the following items you are filing with this form. Do not count copies of the same document.

Continuation sheets of this form

THE PATENT OFFICE A 19 APR 2000 RECEIVED BY FAX	Description Claim(s) Abstract Drawing(s)
----------------------------------------------------------	---------------------------------------------------

11 sheets ✓ inc. abstract

3 sheets ✓ G.A.

10. If you are also filing any of the following, state how many against each item.

Priority documents

Translations of priority documents

Statement of inventorship and right to grant of a patent (Patents Form 7/77)

Request for preliminary examination and search (Patents Form 9/77)

Request for substantive examination (Patents Form 10/77)

Any other documents  
(please specify)

11.

I/We request the grant of a patent on the basis of this application.

Signature William E. Bird Date

William E. Bird

19 April 2000

12. Name and daytime telephone number of person to contact in the United Kingdom

0181-301-1129

JANE BIRD

## Warning

After an application for a patent has been filed, the Comptroller of the Patent Office will consider whether publication or communication of the invention should be prohibited or restricted under Section 22 of the Patents Act 1977. You will be informed if it is necessary to prohibit or restrict your invention in this way. Furthermore, if you live in the United Kingdom, Section 23 of the Patents Act 1977 stops you from applying for a patent abroad without first getting written permission from the Patent Office unless an application has been filed at least 6 weeks beforehand in the United Kingdom for a patent for the same invention and either no direction prohibiting publication or communication has been given, or any such direction has been revoked.

## Notes

- 1) If you need help to fill in this form or you have any questions, please contact the Patent Office on 0645 500505.
- 2) Write your answers in capital letters using black ink or you may type them.
- 3) If there is not enough space for all the relevant details on any part of this form, please continue on a separate sheet of paper and write "see continuation sheet" in the relevant part(s). Any continuation sheet should be attached to this form.
- 4) If you have answered 'Yes' Patents Form 7/77 will need to be filed.
- 5) Once you have filled in the form you must remember to sign and date it.
- 6) For details of the fee and ways to pay please contact the Patent Office.

# The Info2Clear System for On-line Copyright Management

Note: the following information is provided for purposes of filing of patent applications and patent offices may be make the information available to the public by file inspection or publication of patent application or patent documents as required by law. However, the applicant and authors retain all copyright in the information with respect to its use by third parties.

# Table of Contents

- 1. Abstract ..... 3
- 2. Change Log ..... 4
- 3. Get-a-seal.com ..... 5
  - 3.1. Introduction ..... 5
  - 3.2. Sequence of events ..... 5
    - 3.2.1. Using web-access (get-a-seal.com) ..... 5
    - 3.2.2. Using the publishing agent ..... 7
    - 3.2.3. Using the Info2Clear Publishing Proxy ..... 7
- 4. Get-a-copy.com..... 9
  - 4.1. Introduction..... 9
  - 4.2. Sequence of events ..... 9
- 5. Certificates ..... 11



## 1. Abstract

Info2Clear is a new service on the Internet, allowing on-line registration of intellectual property (through the service *get-a-seal.com*) and the on-line sale of the reproduction rights (through the service *get-a-copy.com*) of this intellectual property.

This document provides an overview of how the system works.



## 3. Get-a-seal.com

### 3.1. Introduction

The *get-a-seal.com* service provides publishers with a certificate of possession of intellectual property. A publisher uploads digital content to the [www.get-a-seal.com](http://www.get-a-seal.com) site. After on-line payment (or in case of registered publishers, after a record was written to the billing database for monthly invoicing) the publisher receives a time-stamped and signed certificate from Info2Clear, stating that they submitted the information of which a cryptographic message digest is given at the exact date and time to Info2Clear. The certificate therefore constitutes proof of possession of certain intellectual property, which can be used in disputes regarding plagiarism.

### 3.2. Sequence of events

The following list denotes a series of events that are followed when a publisher registers information (typically called '*an article*') with Info2Clear, using the *get-a-seal.com* service.

#### 3.2.1. Using web-access (*get-a-seal.com*)

1. The publisher points his browser to the <http://www.get-a-seal.com> site or follows the hyperlink to the site from the <http://www.Info2Clear.com> site.
2. The publisher enters the details of the article: Its author, the description (i.e. title), a set of keywords, the type of document (text, photograph, audio, video, ...)
3. The publisher enters a reproduction profile that determines if and when the information can (or cannot) be sold and if so, at which price. The reproduction profile also determines a number of price categories for which reproduction rights are for sale. Each category has its own pricing table. Categories can be freely defined by the publisher. They could e.g. be 'reproduction in print for

commercial use', 'reproduction in print for non-profit use', 'reproduction on the web for commercial use', etc...

In order to make it easier for publishers to manage the reproduction profiles, the publisher can create a number of standard reproduction profile templates. The publisher can select one of these templates to base the reproduction profile on. The profile for the article is then copied from the template and -if necessary- edited further by the publisher.

4. The article is uploaded by the publisher to the website using HTTP POST.
5. If the publisher is known and has a sound credit record, a record is logged in the billing database, which will result in an invoice at the end of the month. If the publisher is not known, or if the publisher does not have a clean credit record, the publisher will be redirected to an on-line credit card payment page. The process only continues when the on-line payment transaction was accepted by the on-line payment service.
6. The publisher receives an overview of the submitted article, its cryptographic message digest and a notification that the article was accepted for registration.
7. The article is stored at Info2Clear. A publishing certificate is generated that contains the article's message digest, a timestamp and is signed with Info2Clear's private key.
8. The publishing certificate is sent to the publisher using e-mail. The e-mail also contains a fragment of HTML code, which the publisher can paste in his web pages or e-zines. The HTML fragment is a get-a-copy icon and hyperlink that provides a link to the get-a-copy page for this article, on which third parties can purchase the reproduction rights to this article. The hyperlink in this fragment uses the message digest of the article.
9. If allowed so by the Publishing Profile, a web page is built to represent the article. This web page can be used by the Info2Clear search-engine or to grant potential buyers of the reproduction rights a preview of the information.  
In case the article was a photograph, the shown information can be a thumbnail version, a stamped version, the complete photograph, an abstract of the photograph, a (restricted) PDF version or no information at all.

In case the article was text, an abstract can be given, the complete text, only the first  $n$  lines of the article, a (restricted) PDF version or no information at all.

In case the article was audio, a reduced quality version, a shortened version, the integral version or none can be given, again, according to the publisher's wishes as defined in the Publishing Profile.

10. A copy of the publishing certificate is kept at Info2Clear.

### ***3.2.2. Using the publishing agent***

1. The publisher uses a special 'agent' (computer application) to register information with Info2Clear.
2. The agent allows the publisher to select one or more articles on his computer system and submit them for registration. The publisher can then set the Publishing Profile for this article, optionally using the locally stored Reproduction Profile Templates.
3. The agent software immediately calculates the Cryptographic Message Digest for the article, allowing the publisher to share hyperlinks to the preview information or to the get-a-copy.com reproduction rights selling web page.
4. The agent sends the article and its Reproduction Profile to Info2Clear. The agent uses error detection and retry scheduling to send the article and Publishing Data to Info2Clear. The article and Reproduction Profile are encrypted to ensure confidentiality.
5. At Info2Clear, the publisher is checked for credit worthiness and if the check is successful, a publishing certificate is generated. The procedure in section 3.2.1. starting at step 7 is then followed.

### ***3.2.3. Using the Info2Clear Publishing Proxy***

1. On-site at the publisher's, an Info2Clear Publishing Proxy machine is installed. The Publishing Proxy is connected directly to the publisher's publishing system.

The editors using the publishing system can choose a Publishing Profile Template on the publishing system.

2. When the Info2Clear Publishing Proxy (IPP) receives an article, the Publishing Profile is generated using the selected Template. A Cryptographic Message Digest is calculated. An HTML fragment is created on the Publishing Proxy that can be used to paste on the HTML pages in order to provide a hyperlink to the get-a-copy.com pages, which third parties can use to purchase reproduction rights.
3. The article and the Publishing Profile are sent to Info2Clear, using retry scheduling, error detection and IPsec encryption.
4. At Info2Clear, the publisher is checked for credit worthiness and if the check is successful, a publishing certificate is generated. The procedure in section 3.2.1. is then followed, starting with step 7.

## 4. Get-a-copy.com

### 4.1. Introduction

The get-a-copy.com service allows third parties to purchase limited reproduction rights for articles that were registered by publishers on the Get-a-seal.com service. An article can be any sort of information: A text, a photographic image, audio, video or any other form of digital information.

The buyer of reproduction rights will receive a Copyright Certificate. The Copyright Certificate is time stamped and contains the number of allowed reproductions, the usage category for the reproductions, the identification of the article (Message Digest) an identification of the Original Publisher and copyright holder and the level of certainty with which Info2Clear has established the identity of the publisher.

The copyright certificate constitutes proof for the buyer that certain -limited- reproduction rights were purchased from the original publisher.

### 4.2. Sequence of events

1. The potential buyer of reproduction rights is transferred to the purchasing page, by means of a URL containing the Cryptographic Message Digest of the article. Typically, (but not necessarily) this URL could be a hyperlink on the publisher's website, provided in the HTML fragment that Info2Clear provided to the publisher, as described in section 3.2.1., step 8 and section 3.2.3., step 2 of this document.
2. The purchasing page clarifies to the potential buyer, that this page can be used to purchase the reproduction rights to this page. It also illustrates with a few example cases why this can be necessary. It provides the potential buyer with an overview of the categories for which the reproduction rights are for sale. (See

section 3.2.1., step 3 of this document). The potential buyer can then select a category of reproduction rights.

3. The potential buyer is presented with a price table for the selected category. The price table displays the price per reproduction, for a certain range of desired reproductions: This allows for a price per reproduction that decreases for larger numbers of desired reproductions.
4. The buyer can enter the desired number of reproductions. He will then be presented with a credit card information entry page or alternatively, when the buyer is a subscriber, with a confirmation page showing the credits that will be deducted from his account, and the amount of credits left.
5. A Copyright Certificate is generated, stating the number of reproductions paid for, the category of reproduction chosen by the buyer, the identity of the buyer, the identity of the publisher and the level of certainty with which the latter identity was checked by Info2Clear. This certificate is signed with one of Info2Clear's private keys, ensuring that this certificate constitutes proof of purchase for the buyer. The certificate is sent to the buyer using e-mail. A copy is kept at Info2Clear. The certificate can be verified on-line, as described in chapter 5 of this document.
6. An HTML fragment is generated that contains an icon and a hyperlink to the on-line version of the Copyright Certificate kept at InfoClear. The buyer can add the HTML fragment to the reproductions he made, in order to prove his rights for reproduction. The HTML fragment is sent to the buyer using e-mail.
7. The buyer is transferred back to the page where he followed the initial hyperlink to the purchasing page.



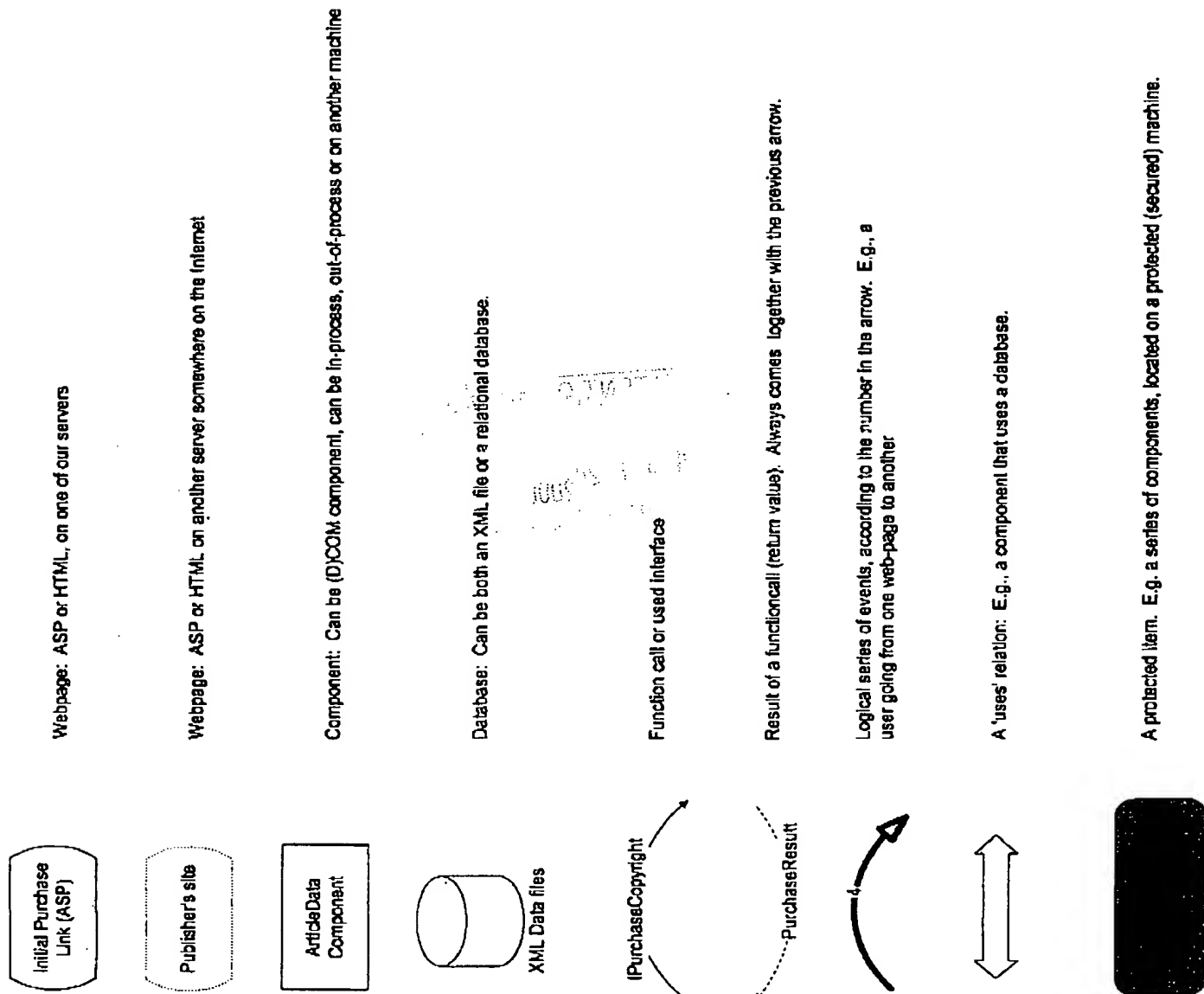
## 5. Certificates

Both the Info2Clear *Publishing Certificate* (which is handed to the publisher as a time stamped proof of the electronic publishing of an article) and the Info2Clear *Copyright Certificate* (which constitutes proof of purchase of reproduction rights), are XML formatted certificates, signed with an Info2Clear private key, in order to guarantee the authenticity of the certificates.

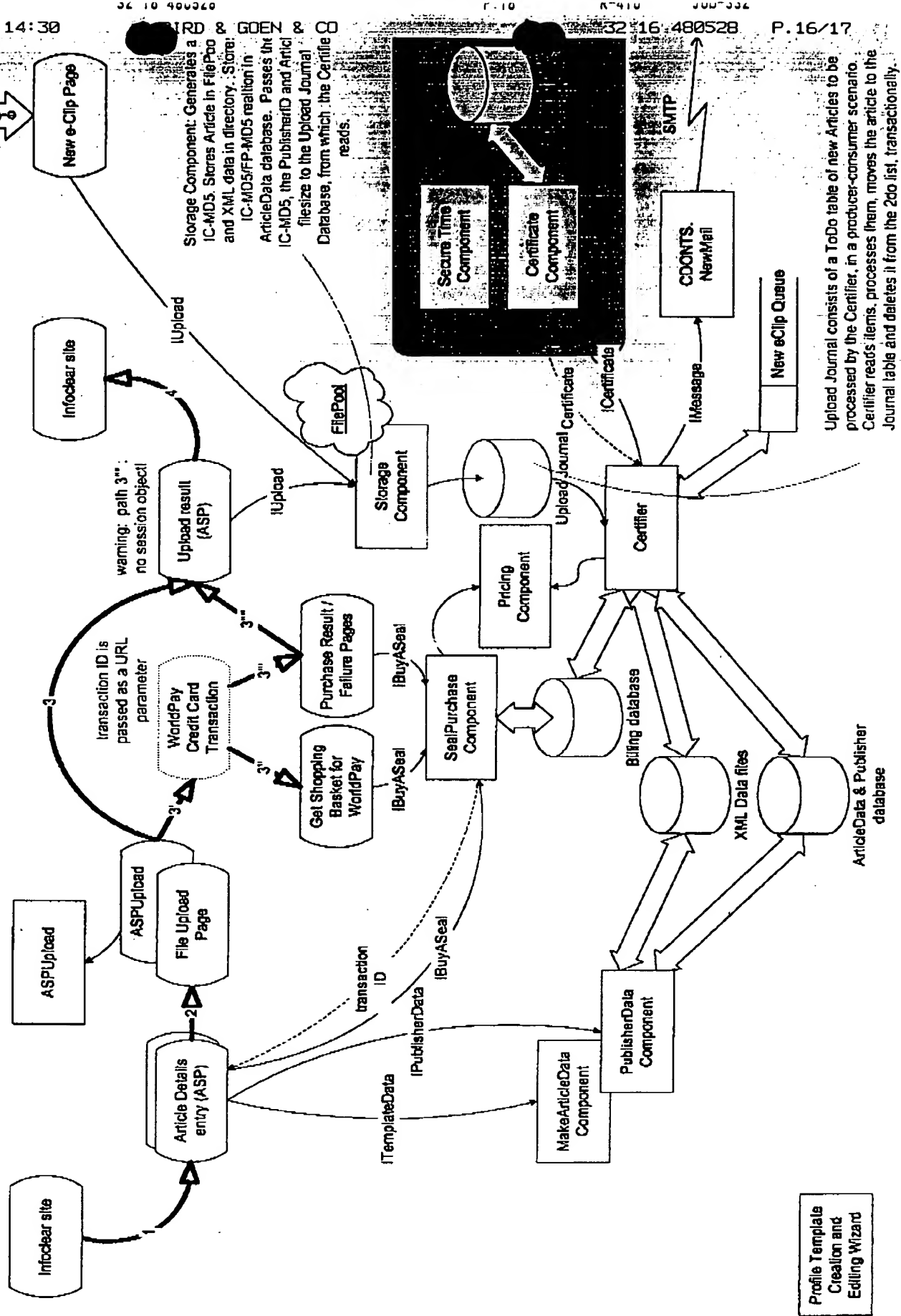
The signature covers the content in the <Content> element of certificate. This element contains a human readable text, some XML datafields describing the article, its author and the validity period of the certificate (and in case of the copyright certificate, also the buyer and the granted usage specifications). Only the non-white space in the <Content> field is signed: White space such as spaces, tabs, linefeeds, carriage-returns are not included in the signature calculation, in order to allow automatic word-wrap of the certificate.

Certificates can be verified on-line on the Info2Clear website. The on-line verification procedure is protected by SSL transmissions (using HTTPS), thus guaranteeing that the verification procedure itself is authentic. Therefore, the chain of authentication is as follows: Info2Clear certificates are verified by Info2Clear, acting as a trusted third party. The authenticity of the connection to Info2Clear is ensured by VeriSign as the Certificate Authority of the InfoClear WWW PKI key pair. VeriSign therefore acts as a trusted third party to guarantee the authenticity of the connection to Info2Clear.

## Legenda of used symbols



# Web Based Article Upload Component Diagram



Profile Template  
Creation and  
Editing Wizard

Upload Journal consists of a ToDo table of new Articles to be processed by the Certifier, in a producer-consumer scenario. Certifier reads items, processes them, moves the article to the Journal table and deletes it from the ToDo list, transactionally.

# Copyright Purchase Component Diagram

